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ABSTRACT

Questionnaires were mailed to 300 special education teachers of learning disabled and emotionally disturbed students and to 316 pediatricians and psychiatrists to determine the extent of interaction between teachers and physicians in monitoring drug treatment effects. Analysis of teacher data suggested that physician contacts occurred very seldom, although frequency of contact was higher for hyperactivity than for other behavioral disorders. Contact frequency was also higher for teachers of seriously emotionally disturbed students, special class teachers, and teachers at the elementary level. Analysis of the physician data indicated that when physicians do obtain information from teachers, it is most often useful. Data from both groups indicated that contact was no more likely during followup than at diagnosis. (Author/CL)

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Teacher-Physician Interaction in the Treatment of Children with Behavioral Disorders

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Generally agreed upon estimates of the prevalence of hyperactivity among school-aged children range from 5 to 10 percent (Gadow, 1979). Estimates of the prevalence of drug management fall considerably lower. Krager and Safer (1974) reported that in 1971, 1.07 percent of the elementary population in Baltimore County, Maryland received medication for the management of hyperactivity; by 1973 this figure had grown to 1.73 percent. In a subsequent report (Krager, Safer, and Earhardt, cited in Gadow, 1979), the percentage had risen to slightly over 2 percent by 1977. When special education classes are considered separately, percentages are considerably higher. Gadow (1976) found that 7.9 percent of children in early special education programs in Illinois received medication for the management of hyperactivity; Krager et al. reported that 15.3 percent of their special education population received medication. Using these prevalence estimates, Sprague and Gadow (1976) conjectured that roughly 600,000 children across the nation receive medication in the treatment of hyperactivity.

The importance of monitoring the effects of medication cannot be overestimated. Medical ethics alone would dictate careful monitoring, but the potential for side effects and the fact that up to 25 percent of children receiving medication are not expected to respond positively to the treatment create a more compelling need. Without careful monitoring, a substantial proportion of children receiving medication would be exposed to the risks of side effects without appreciating the benefits of the treatment. Numerous writers (Sleator and von Newmann, 1974; Sprague and Gadow, 1976; Weithorn and Ross, 1975) have argued for the importance of monitoring; most have advocated that teachers play a central role.

Two related arguments have been advanced for involving teachers in the monitoring of the effects of medication. Sleator and von Newmann (1974) reported that while teacher ratings were sensitive to the presence and

absence of medication and to dosage levels, parent ratings were not. These authors pointed out that teachers see children in structured environments which highlight the effects of the treatment, while parents, who observe their children in relatively unstructured settings, are less likely to detect behavior change. This argument is consistent with the finding that the behavior of hyperactive children differs from the behavior of their normal peers less in unstructured than structured settings (Ellis, Witt, Reynolds, and Sprague, 1974; Schleifer, Weiss, Cohen, Elman, Cvejic, and Kruger, 1975).

Several researchers (Bosco and Robin, 1976; Gadow, cited in Sprague and Gadow, 1976; Robin and Bosco, 1973; Weithorn and Ross, 1975) have investigated the issue of teacher-physician interaction in monitoring the effects of medication. Their results suggest that the degree of interaction is low. The elementary teachers surveyed by Weithorn and Ross (1975) reported that they had had direct contact with physicians for 18 percent of the children in their classes who had received drug treatment. Bosco and Robin (1976) also surveyed elementary teachers and found that the proportion of cases in which direct contact occurred was 22 percent. [In a previous analysis, Robin and Bosco (1973) reported that nearly 50 percent of the teachers surveyed reported that evaluations were solicited "Generally" or "Almost Always," though these contacts were not necessarily with physicians.] Finally, in Gadow's survey of preschool special educators, less than one third reported direct contact with the prescribing physician.

The purposes of the present study are first to determine whether the low frequency of interaction is also characteristic of physicians treating school-aged children in special education programs; second whether interaction is infrequent at both diagnosis and follow-up; and third, whether low frequency of interaction characterizes teacher-physician interaction in the management of other behavioral disorders. Finally, physicians were surveyed about the

adequacy of the information they obtained from teachers to determine whether infrequent contacts are attributable to teachers' failure to provide useful information.

Method

Teacher Survey

Subjects. Questionnaires were mailed to a random sample of 300 special education teachers employed by intermediate units in the state of Pennsylvania. (Intermediate units are regional administrative units which provide special education programming, among other services, to participating districts. Seventeen of the 29 intermediate units in Pennsylvania were sampled.) The teachers sampled taught either learning disabled or emotionally disturbed children in resource or special class programs at levels from preschool through senior high. No attempt was made to stratify the sample on the basis of handicapping condition, class type, or level. Two hundred twenty-three questionnaires were returned, of which 209 were complete and usable in the analyses.

Procedure. Questionnaires were mailed in the spring of 1979 and follow-up postcards one month later. Teachers were asked to respond to descriptive items, as well as items which assessed the extent and nature of their involvement with physicians. The descriptive portion of the questionnaire included items which asked for years of teaching experience, location and nature of current teaching assignment, number of children in current class, and number of children in current class who exhibited common patterns of deviant behavior. These five patterns were based upon the factor analysis of Jenkins (1966), and were expressed as excessive withdrawal, shyness; excessive anxiety, fearfulness; hyperactivity, excessive distractibility; overaggressiveness, destructiveness; and excessive lying, stealing, and cheating.

These five categories were used in the physician contact items as well. Teachers were first asked to estimate the frequency with which children exhibiting the problem behaviors had been treated by physicians. They were asked to rate the frequency with which they had been contacted by physicians at diagnosis, and, in a third question, during follow-up. On these three items, the same seven point scale was used; points on the scale ranged from 1, Almost Never, to 7, Almost Always.

Physician Survey

Subjects. Questionnaires were mailed to a random sample of 200 pediatricians and 116 psychiatrists practicing in Pennsylvania, and certified by the American Board of Medical Specialities (1978). Responses from 111 pediatricians were returned, of which 63 proved usable in the data analyses. Of the 89 returns from the psychiatrists, 17 were usable. The large discrepancy between the number of returns and the number of usable returns was attributable to the substantial number of physicians who felt that the information requested was confidential, and to the additional number of psychiatrists whose practice was limited to adults.

Procedure. Questionnaires were mailed to the sample of pediatricians in the fall of 1978, and to the sample of psychiatrists in the winter of 1979. One month after the initial mailing to the pediatricans, nonrespondents were telephoned; psychiatrists who had failed to respond within a month of the initial mailing received follow-up postcards. The questionnaire mailed to the two groups of physicians was essentially the same, although psychiatrists were asked to indicate the percentage of their patient population of school age. Physicians were asked to describe the nature of their practice, to estimate the percentage of their patients which exhibited each of the five patterns of problem behavior, and to describe the treatment they most commonly prescribed for children exhibiting these patterns. In addition, they were asked to rate

the frequency with which information obtained from various sources proved useful at diagnosis and during follow-up. The sources included parents, teachers, other school personnel, social welfare agencies, law enforcement agencies, and other physicians or psychologists. The seven point scale described above was used for these two items.

Results

Teacher Survey

The mean frequencies of interaction by classification at diagnosis and follow-up appear in Table 1. Overall, the frequency of interaction between

Insert Table 1 About Here

special education teachers and physicians is quite low; even the highest cell mean (Hyperactivity at Diagnosis=2.11) indicates that physicians contacted teachers very seldomly. Low frequency of contacts occurred at both follow-up and diagnosis, and across all five classifications. Contact was most frequent in the management of hyperactive children, although the ratings for the hyperactive classification were also low. (Because the ratings were uniformly low, results of statistical tests of significance are not reported. While some means differed significantly, the practical importance of the differences seemed negligible.)

An additional analysis of a subtest of 168 teachers was conducted to determine if child classification (SED vs. LD), type of class (special class vs. resource program), or level (elementary vs. secondary) influenced the frequency of contact. It was found that physicians were more likely to contact teachers of SED children than teachers of LD children; teachers in special classes than resource program teachers; and elementary teachers than

secondary teachers. (These differences were small and, for all practical purposes, inconsequential.)

Sixteen teachers whose average ratings on the hyperactive classification exceeded 5 (often) were compared to the entire sample on years of teaching experience, location in the state, class size, and child classification, type of class, and level, to determine if frequent interacters differed from the sample as a whole on these variables. There were no significant differences between the two groups on experience, location, or class size. However, the distribution of the high frequency interacters by child classification, class type, and level differed from the distribution of the entire sample such that, at the elementary level, there were more special class SED teachers than expected, and fewer special class LD teachers than expected ($\chi^2_{(1)}=6.96$, $p < .01$).

Physician Survey

The mean frequencies with which physicians found information from the six sources useful at diagnosis and follow-up appear in Table 2. It is

Insert Table 2 About Here

apparent from these data that when physicians do obtain information from teachers they often or most often find it useful, at both diagnosis and follow-up. This generalization held for both pediatricians and psychiatrists. Both groups of physicians were more likely to find information from parents useful, but less likely to find information from other school personnel useful. Psychiatrists were more likely than pediatricians to find information from teachers, other school personnel, social agencies, and law enforcement agencies useful.

Discussion

The low frequency with which the respondents in this study reported contacts from physicians in the diagnosis and monitoring of treatment for hyperactivity corroborates previous research with regular class teachers (Bosco and Robin, 1976; Weithorn and Ross, 1975) and preschool special educators (Gadow, cited in Sprague and Gadow, 1976). Physicians contact special educators very seldomly on the average, even though the percentage of hyperactive children in special education programs is greater than the percentage in regular classes. However, physicians do initiate contact with teachers more frequently in the management of hyperactivity than any of the other behavioral disorders.

More importantly, physicians were no more likely to contact teachers during follow-up than at diagnosis. Consequently, decisions about titrating dosage, and judgments about the effects of drug holidays and the seriousness of side effects, are typically made in the absence of information from special education teachers. If parents are sometimes less sensitive to changes in a drug regimen than teachers (Sleator and von Newmann, 1974), then physicians may be making decisions without a complete picture of effect.

Finally, the results of this study suggest that physicians do find the information they obtain from teachers useful. Consequently, the low level of physician-initiated contact cannot be fairly attributed to the inability of teachers to provide useful information. Instead, the problem may be largely logistical. Teachers, like physicians, are busy throughout the work day; the probability of one readily contacting the other is undoubtedly low. (In telephone follow-up of the pediatricians sampled in this study, only 17 percent were reached directly.) A potential solution lies in teacher preparation programs: pre-service teachers, especially special educators, must be prepared to initiate contact with physicians, and must feel confident that the information

they have is both important and useful. Bosco and Robin (1976), however, reported that in-service and pre-service teachers, as well as teacher trainers, perceived the role of the teacher as only a moderately active one: being informed and responding to physician's evaluations. Therefore, an initial step must be taken to modify the attitudes of teachers and those persons responsible for their training.

Table 1

Teacher Data: Mean Frequencies by Classification at Diagnosis and Follow-up

	Classifications					
	Withdrawn, Seclusive	Anxious, Fearful	Hyperactive	Overaggressive	Lie, Cheats Steals	Total
Diagnosis	1.32	1.42	2.11	1.59	1.38	1.56
Follow-up	1.23	1.29	1.85	1.45	1.31	1.43
Total	1.28	1.36	1.98	1.52	1.35	1.50

Table 2

Physician Data: Mean Frequency of Useful Information, by Specialty and Source

Source	Diagnosis		Follow-Up	
	Pediatricians	Psychiatrists	Pediatricians	Psychiatrists
Parents	6.38	6.77	6.32	6.35
Teachers	4.51	5.41	4.86	5.41
Other school personnel	3.43	4.35	3.52	4.47
Social Agencies	3.27	4.12	3.46	3.59
Law Enforcement Agencies	1.94	3.65	1.67	2.94
Other Physicians	4.79	4.71	4.54	4.53

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